

DEPARTMENT of ENVIRONMENTAL SERVICES
Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: LONESOME LAKE	Lake Area (ha):	11.01
Town: LINCOLN	Maximum depth (m):	2.6
County: Grafton	Mean depth (m):	1.2
River Basin: Merrimack	Volume (m ³):	136500
Latitude: 44°08'24" N	Relative depth:	0.7
Longitude: 71°42'04" W	Shore configuration:	---
Elevation (ft): 2750	Areal water load (m/yr):	11.92
Shore length (m): 1000	Flushing rate (yr ⁻¹):	9.60
Watershed area (ha): 130.0	P retention coeff.:	0.53
% watershed ponded: 0.0	Lake type:	natural

<u>BIOLOGICAL:</u>		18 January 1995	9 September 1994
DOM. PHYTOPLANKTON (% TOTAL)	#1	SPARSE - NO DOMINANT	DINOBRYON 95%
	#2		
	#3		
PHYTOPLANKTON ABUNDANCE (units/mL)			
CHLOROPHYLL-A (µg/L)			2.62
DOM. ZOOPLANKTON (% TOTAL)	#1	NO ZOOPLANKTON OBSERVED	COLLOTHECA 39%
	#2		(ALL ZOOPLANKTON
	#3		SPARSE)
ROTIFERS/LITER		<1	12
MICROCRUSTACEA/LITER		<1	19
ZOOPLANKTON ABUNDANCE (#/L)		<1	31
VASCULAR PLANT ABUNDANCE			Scat/Common
SECCHI DISK TRANSPARENCY (m)			2.6 Visible on bottom
BOTTOM DISSOLVED OXYGEN (mg/L)		12.1	11.5
BACTERIA (E. coli, #/100 ml)	#1		
	#2		
	#3		

SUMMER THERMAL STRATIFICATION:

not stratified

Depth of thermocline (m): None
Hypolimnion volume (m³) : None
Anoxic volume (m³) : None

CHEMICAL:

Lake: LONESOME LAKE

Town: LINCOLN

	18 January 1995		9 September 1994		
DEPTH (m)	1.0		1.5		
pH (units)	4.7		6.1		
A.N.C. (Alkalinity)	-0.7		1.1		
NITRATE NITROGEN	0.27		0.05		
TOTAL KJELDAHL NITROGEN			< 0.10		
TOTAL PHOSPHORUS	0.007		0.007		
CONDUCTIVITY (μ mhos/cm)	19.4		18.6		
APPARENT COLOR (cpu)	32		27		
MAGNESIUM			0.16		
CALCIUM			1.5		
SODIUM			0.8		
POTASSIUM			0.40		
CHLORIDE	< 2		< 2		
SULFATE	3		4		
TN : TP					
CALCITE SATURATION INDEX			5.0		

All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 1994

D.O. S.D. PLANT CHL TOTAL CLASS

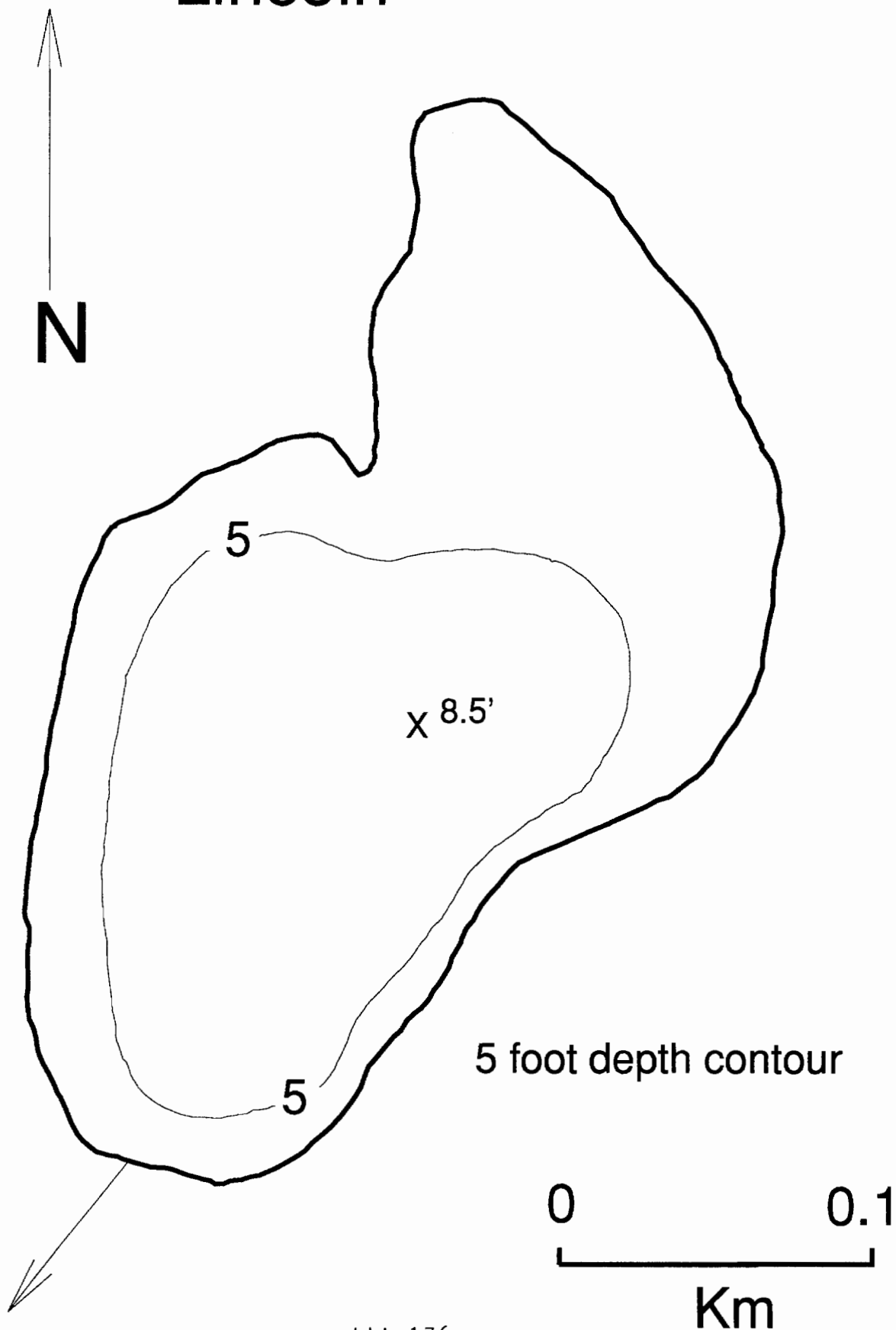
**	2	2	0	4	Oligo.
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COMMENTS:

1. AKA Tamarack Pond and Moran Lake.
2. This is a remote (relatively short hike) mountain pond located in Franconia Notch State Park.
3. It was partially surveyed previously and classified in 1980. There was no change in classification and little change in water quality between the two dates.
4. It has also been sampled by helicopter during spring turnover since 1982. At that time, pH values generally ranged in the mid 5's, about halfway between the winter and summer values listed above. ANC values ranged from .5 to 1 mg/L.

Lonesome Lake

Lincoln

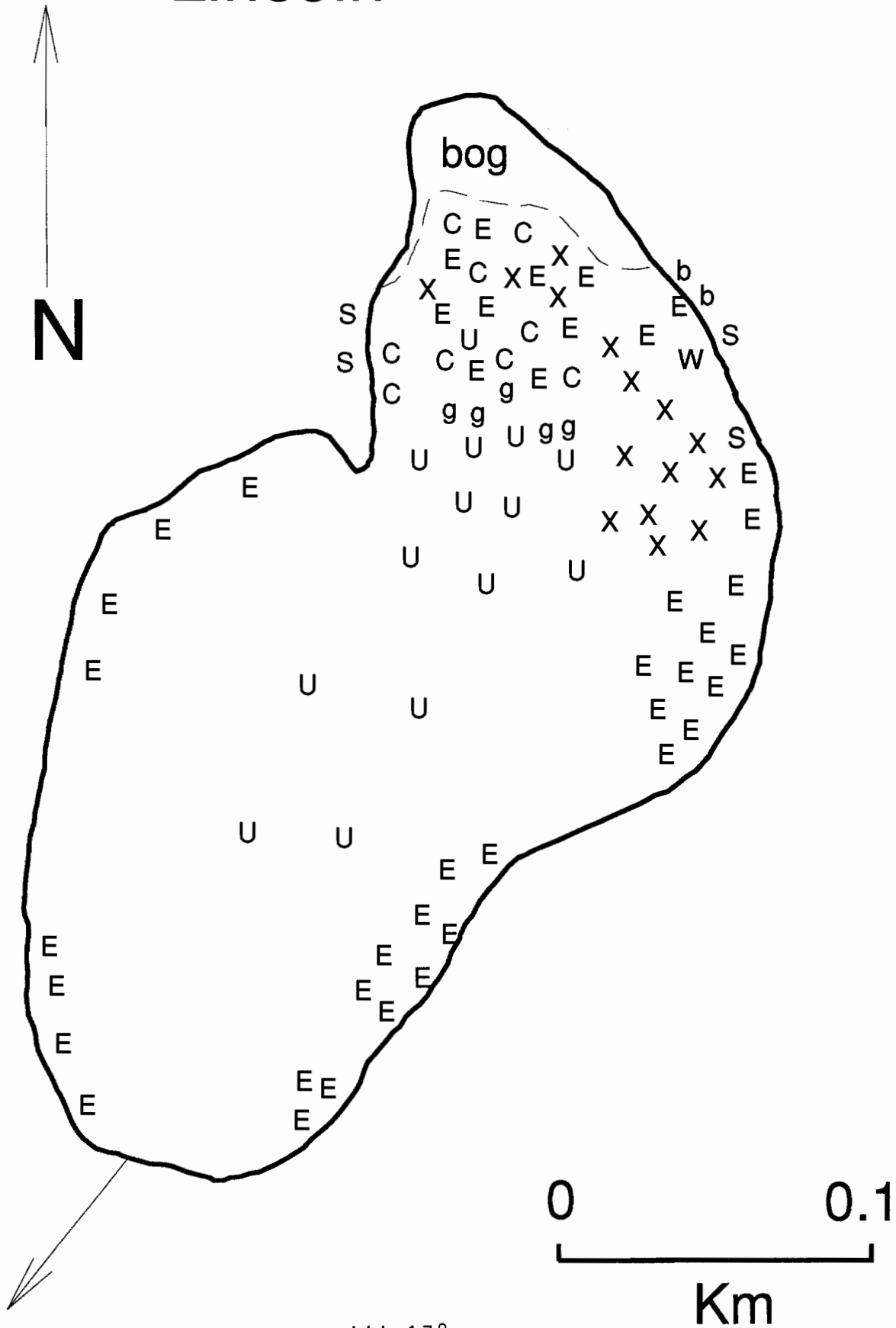


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